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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/826,251

04/04/2001

Ylian Saint-Hilaire

INTL-0554-US (P11113)

2672

7590

01/16/2004

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EXAMINER

PERSINO, RAYMOND B

ART UNIT

PAPER NUMBER

2682

DATE MAILED: 01/16/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/826,251

Applicant(s)

SAINT-HILAIRE ET AL.

Examiner

Raymond B. Persino

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. The disclosure is objected to because of the following informalities: Line 13 on page 2 includes the language "...may be require..." Lines 1-2 on page 7 includes the language "...acts a proxy..." Appropriate correction is required.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 11-19 and 21-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over CANNON et al (US 6,650,871 B1) in view of TONY et al (US 2001/0002912 A1) and BEASLEY (US 5,321,736 A).

Regarding claim 1, CANNON et al discloses cordless RF piconet range extension to enable a piconet to communicate with another piconet outside its coverage area (column 6 lines 1-53). CANNON et al discloses that the base station and the handset form a scatternet (column 4 lines 41-50). However, CANNON et al is silent as to enumerating a plurality of devices in a first radio frequency network. TONY et al discloses enumerating a plurality of devices in a first radio frequency network (paragraphs 75-88). Further TONY et al discloses that in a scatternet connection

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between two piconets, the connecting nodes are slaves in both piconets (see paragraph 97) and further it is disclosed that enumeration information is sent from a master to slaves (see paragraph 88). Thus, per TONY et al, enumeration information from both piconets would be sent over CANNON et al's connection between the piconets.

However, both CANNON et al and TONY et al disclose that the connection between the piconets is over an RF connection and therefore neither CANNON et al nor TONY et al disclose that the connection between the piconets is over a non-radio frequency network. BEASLEY discloses an RF repeater arrangement linking cordless handsets to a base station via a non-radio frequency network (abstract). Thus, per BEASLEY, CANNON et al's connection between the piconets via the base station and handset would be via a non-radio frequency network. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify CANNON et al per TONY et al and BEASLEY. Motivation to modify CANNON et al per TONY et al is that TONY et al teaches a way to overcome the shortcomings in the Bluetooth specification by disclosing how to address and route packets from one piconet to another (see TONY et al, paragraph 20). Motivation to modify the combination of CANNON et al and TONY et al is that while CANNON et al teaches of range extension for piconets, it is limited by the distance that the base and handset are capable of communicating at. Thus, BEASLEY enhances the combination of CANNON et al and TONY et al by increasing the distance the handset and base station would be able to communicate and thus increasing the distance with which the piconets would be able to communicate.

Regarding claim 2, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses automatically enumerating a plurality of devices in a Bluetooth radio frequency network (paragraphs 75-88).

Regarding claim 3, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses developing enumeration data for a plurality of devices in a radio frequency network and communicating said enumeration data over a scatternet connection between piconets (paragraphs 75-88 and 97). BEASLEY discloses that the scatternet connection between piconets per CANNON et al would be via a non-radio frequency network (abstract).

Regarding claim 4, see the rejection of the parent claim concerning the subject matter this claim is dependent from. BEASLEY discloses that the non-radio frequency network is a telephone network (column 1 line 26).

Regarding claim 5, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses enumerating a plurality of devices in a second radio frequency network (paragraphs 75-88 and 97).

Regarding claim 6, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses combining said first and second radio frequency networks into a combined radio frequency network (paragraph 97). Also, CANNON et al discloses combining said first and second radio frequency networks into a combined radio frequency network (column 6 lines 1-53).

Regarding claim 7, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses enabling any device in said first radio frequency network to communicate over said non-radio frequency network with any device in said second radio frequency network (paragraphs 75-88 and 97).

Regarding claim 8, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses transmitting data (routing information) between said first and second radio frequency networks at the same time that a voice communication (Bluetooth supports voice communication) is ongoing between a device in said first radio frequency network and a device in said second radio frequency network (paragraphs 89-102). BEASLEY discloses that the scatternet connection between piconets per CANNON et al would be via a non-radio frequency network (abstract).

Regarding claim 9, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al discloses a cordless telephone as a Bluetooth device (column 6 lines 1-53). Also, TONY et al further discloses that virtually any digital device can be a Bluetooth device including a mobile telephone (paragraphs 2 and 9).

Regarding claim 11, CANNON et al discloses cordless RF piconet range extension to enable a piconet to communicate with another piconet outside its coverage area (column 6 lines 1-53). CANNON et al discloses that the base station and the handset form a scatternet (column 4 lines 41-50). However, CANNON et al is silent as

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to enumerating a plurality of devices in a first radio frequency network. TONY et al discloses enumerating a plurality of devices in a first radio frequency network (paragraphs 75-88). Further TONY et al discloses that in a scatternet connection between two piconets, the connecting nodes are slaves in both piconets (see paragraph 97) and further it is disclosed that enumeration information is sent from a master to slaves (see paragraph 88). Thus, per TONY et al, enumeration information from both piconets would be sent over CANNON et al's connection between the piconets. However, both CANNON et al and TONY et al disclose that the connection between the piconets is over an RF connection and therefore neither CANNON et al nor TONY et al disclose that the connection between the piconets is over a non-radio frequency network. BEASLEY discloses an RF repeater arrangement linking cordless handsets to a base station via a non-radio frequency network (abstract). Thus, per BEASLEY, CANNON et al's connection between the piconets via the base station and handset would be via a non-radio frequency network. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify CANNON et al per TONY et al and BEASLEY. Motivation to modify CANNON et al per TONY et al is that TONY et al teaches a way to overcome the shortcomings in the Bluetooth specification by disclosing how to address and route packets from one piconet to another (see TONY et al, paragraph 20). Motivation to modify the combination of CANNON et al and TONY et al is that while CANNON et al teaches of range extension for piconets, it is limited by the distance that the base and handset are capable of communicating at. Thus, BEASLEY enhances the combination of CANNON et al and

TONY et al by increasing the distance the handset and base station would be able to communicate and thus increasing the distance with which the piconets would be able to communicate.

Regarding claim 12, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses automatically enumerating a plurality of devices in a Bluetooth radio frequency network (paragraphs 75-88).

Regarding claim 13, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses developing enumeration data for a plurality of devices in a radio frequency network and communicating said enumeration data over a scatternet connection between piconets (paragraphs 75-88 and 97). BEASLEY discloses that the scatternet connection between piconets per CANNON et al would be via a non-radio frequency network (abstract).

Regarding claim 14, see the rejection of the parent claim concerning the subject matter this claim is dependent from. BEASLEY discloses that the non-radio frequency network is a telephone network (column 1 line 26).

Regarding claim 15, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses enumerating a plurality of devices in a second radio frequency network (paragraphs 75-88 and 97).

Regarding claim 16, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses combining said first



and second radio frequency networks into a combined radio frequency network (paragraph 97). Also, CANNON et al discloses combining said first and second radio frequency networks into a combined radio frequency network (column 6 lines 1-53).

Regarding claim 17, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses enabling any device in said first radio frequency network to communicate over said non-radio frequency network with any device in said second radio frequency network (paragraphs 75-88 and 97).

Regarding claim 18, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses transmitting data (routing information) between said first and second radio frequency networks at the same time that a voice communication (Bluetooth supports voice communication) is ongoing between a device in said first radio frequency network and a device in said second radio frequency network (paragraphs 89-102). BEASLEY discloses that the scatternet connection between piconets per CANNON et al would be via a non-radio frequency network (abstract).

Regarding claim 19, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al discloses a cordless telephone as a Bluetooth device (column 6 lines 1-53). Also, TONY et al further discloses that virtually any digital device can be a Bluetooth device including a mobile telephone (paragraphs 2 and 9).

Regarding claim 21, CANNON et al discloses cordless RF piconet range extension to enable a piconet to communicate with another piconet outside its coverage area that includes a radio frequency receiver and a radio frequency transmitter (column 6 lines 1-53). CANNON et al discloses that the base station and the handset form a scatternet (column 4 lines 41-50). However, CANNON et al is silent as to enumerating a plurality of devices in a first radio frequency network. TONY et al discloses enumerating a plurality of devices in a first radio frequency network (paragraphs 75-88). Further TONY et al discloses that in a scatternet connection between two piconets, the connecting nodes are slaves in both piconets (see paragraph 97) and further it is disclosed that enumeration information is sent from a master to slaves (see paragraph 88). Thus, per TONY et al, enumeration information from both piconets would be sent over CANNON et al's connection between the piconets. However, both CANNON et al and TONY et al disclose that the connection between the piconets is over an RF connection and therefore neither CANNON et al nor TONY et al disclose that the connection between the piconets is over a non-radio frequency network. BEASLEY discloses an RF repeater arrangement linking cordless handsets to a base station via a non-radio frequency network (abstract). Thus, per BEASLEY, CANNON et al's connection between the piconets via the base station and handset would be via a non-radio frequency network. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify CANNON et al per TONY et al and BEASLEY. Motivation to modify CANNON et al per TONY et al is that TONY et al teaches a way to overcome the shortcomings in the Bluetooth specification by

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disclosing how to address and route packets from one piconet to another (see TONY et al, paragraph 20). Motivation to modify the combination of CANNON et al and TONY et al is that while CANNON et al teaches of range extension for piconets, it is limited by the distance that the base and handset are capable of communicating at. Thus, BEASLEY enhances the combination of CANNON et al and TONY et al by increasing the distance the handset and base station would be able to communicate and thus increasing the distance with which the piconets would be able to communicate.

Regarding claim 22, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al further discloses that radio frequency transmitter includes a telephone radio frequency transmitter (column 6 lines 1-53). Also, TONY et al further discloses that virtually any digital device can be a Bluetooth device including a mobile telephone (paragraphs 2 and 9).

Regarding claim 23, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al further discloses that the transmitter includes a Bluetooth transmitter (column 6 lines 1-53).

Regarding claim 24, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al further discloses a transmitter to transmit information over at least two different radio frequency networks (Bluetooth transmitter may be part of more than one piconet per TONY et al) as well as a telephone network (column 6 lines 1-53).

Regarding claim 25, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses that virtually any

digital device can be a Bluetooth device including a mobile telephone (paragraphs 2 and 9). Thus a device per TONY et al would have a transmitter to transmit over a cellular telephone network and a Bluetooth network.

Regarding claim 26, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al discloses receiving enumeration data over a radio frequency connection so as to combine the first radio frequency network with a second radio frequency network over a radio frequency connection (paragraphs 75-89 and 97). BEASLEY discloses an RF repeater arrangement linking cordless handsets to a base station via a non-radio frequency network (abstract). Thus, per BEASLEY, the connection between the piconets via the base station and handset would be via a non-radio frequency network.

Regarding claim 27, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al further discloses a receiver and a transmitter to implement a telephone link while simultaneously exchanging data received over a separate radio frequency link (column 6 lines 1-53).

Regarding claim 28, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al further discloses that the transmitter packetizes voice data (column 4 line 66 to column 5 line 30).

Regarding claim 29, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al further discloses that the transmitter packetizes data (column 4 line 66 to column 5 line 30). TONY et al further discloses transmitting data (routing information) between said first and second radio

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frequency networks at the same time that a voice communication (Bluetooth supports voice communication) is ongoing between a device in said first radio frequency network and a device in said second radio frequency network (paragraphs 89-102). BEASLEY discloses that the scatternet connection between piconets per CANNON et al would be via a non-radio frequency network (abstract). Thus the combination teaches that the transmitter packetizes enumeration data and transmits it with packetized voice data.

Regarding claim 30, see the rejection of the parent claim concerning the subject matter this claim is dependent from. TONY et al further discloses that virtually any digital device can be a Bluetooth device including a mobile telephone (paragraphs 2 and 9). Thus a device per TONY et al would have a transmitter to transmit over a cellular telephone network and a Bluetooth network.

4. Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over CANNON et al (US 6,650,871 B1) in view of TONY et al (US 2001/0002912 A1) and BEASLEY (US 5,321,736 A) and further in view of an examiner's official notice.

Regarding claim 10, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al disclose that the two devices that are acting as proxies for the respective piconets are telephonic devices (column 6 lines 1-53). However, CANNON et al does not explicitly disclose that the RF telephonic devices are cellular devices. Nevertheless, the examiner takes official notice that it was known at the time of the invention for RF telephonic devices to be cellular devices. Therefore it would have been obvious to a person of ordinary skill in the art at the time

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the invention was made to have the RF telephonic devices to be cellular devices. A cellular communications arrangement allows for increased mobility.

Regarding claim 20, see the rejection of the parent claim concerning the subject matter this claim is dependent from. CANNON et al disclose that the two device that are acting as proxies for the respective piconets are telephonic devices (column 6 lines 1-53). However, CANNON et al does not explicitly disclose that the RF telephonic devices are cellular devices. Nevertheless, the examiner takes official notice that it was know at the time of the invention for RF telephonic devices to be cellular devices. Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the RF telephonic devices to be cellular devices. A cellular communications arrangement allows for increased mobility.

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

EREKSON (US 6,622,018 B1)

JOHANSSON et al (US 2002/0044549 A1)

HAARTSEN (US 6,590,928 B1)

JAKOBSSON et al (US 2002/0025780 A1)

SOUISSI et al (US 2002/0142721 A1)

KALLANDER et al (US 5,603,080 A)

GEORGES et al (US 6,014,546 A)

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BORGSTAHL et al (WO 98/17032 A1)

6. The non-prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

PIERCE (US 2002/0156861 A1)

WINKLER (US 2002/0160820 A1)

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond B. Persino whose telephone number is (703) 308-7528. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on (703) 308-6739. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

RP

Raymond B. Persino *RP*  
Examiner  
Art Unit 2682

*[Signature]*  
VIVIAN CHIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

*1/12/04*